

#6
Dmt

2-16-01

SEQUENCE LISTING

<110> King, Kendall W
Madura, Rebecca A
Rosey, Everett L

<120> NUCLEIC ACIDS AND PROTEINS OF THE MYCOPLASMA PNEUMONIAE
mhp3 GENE AND USES THEREOF

<130> PC10555

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<141>

<150> US 60/156,602

<151> 1999-09-29

<160> 41

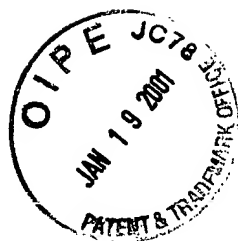
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<212> DNA

<213> Mycoplasma hyopneumoniae



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<212> PRT

<213> Mycoplasma hyopneumoniae

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 Gln Ser Leu Val Tyr Thr Lys Thr Lys Asn Lys Phe Phe Thr Ser Ile
 325 330 335
 Leu Lys Asn Leu Gly Tyr Ser Val Phe Ser Val Leu Ser Asp Leu Tyr
 340 345 350
 Thr Lys Lys Ser Asn Ser Arg Asn Leu Ala Gly Phe Glu Phe Gly Lys
 355 360 365
 Lys Ser Ala Thr Val Tyr Leu Gly Ile Lys Asp Arg Phe Val Asp Ile
 370 375 380
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 405 410 415
 Ala Glu Glu Val Arg Lys Thr Leu Glu Ile Pro Glu Met Pro Asp Lys
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<220>
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 manipulated for in vitro expression

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 ttaacctata aaactgaaga agccggatgg cttgcaggat atgcgaatgc ttcctttttg 540
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 aaaaattctg ataaaaaaac aaagataaca actgataaaa tcgagataaa tcttggggtt 720
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 aaaagtgcaa ccgtttatct tgggaattaaa gacaggtttg tcgatattgc tgatacttct 1080

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 gaagaaaaaa ctaagacaat tcctgccgaa gaagttcgta aaactttaga aattccggaa 1200
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 <213> Artificial Sequence

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 manipulated for in vitro expression

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 35 40 45
 Gly Leu Asn Met Ala Ile Val Thr Ala Gly Gly Thr Val Asn Asp Asn
 50 55 60
 Ser Phe Asn Gln Ser Gly Trp Glu Ala Ile Gln Gln Leu Gly Ala Leu
 65 70 75 80
 Thr Gly Gly Glu Ile Thr Ser Val Asp Ser Ser Thr Ala Glu Leu Glu
 85 90 95
 Gly Lys Tyr Ser Ser Leu Ala Asn Thr Asn Lys Asn Val Trp Val Leu
 100 105 110
 Ser Gly Phe Gln His Gly Asp Ala Phe Thr Arg Trp Leu Lys Ile Pro
 115 120 125
 Glu Asn Lys Gln Leu Phe Thr Glu Lys Asn Ile Ile Ile Leu Gly Ile
 130 135 140
 Asp Trp Thr Asp Thr Glu Asn Val Ile Pro Thr Gly Arg Tyr Ile Asn
 145 150 155 160
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 165 170 175
 Ala Ser Phe Leu Ala Lys Lys Phe Pro Ser Asp Pro Thr Lys Arg Ser
 180 185 190
 Ala Ile Val Ile Gly Gly Gly Ile Ser Pro Ala Val Thr Asp Phe Ile
 195 200 205
 Ala Gly Tyr Leu Ala Gly Ile Lys Ala Trp Asn Leu Lys Asn Ser Asp
 210 215 220
 Lys Lys Thr Lys Ile Thr Thr Asp Lys Ile Glu Ile Asn Leu Gly Phe
 225 230 235 240

Asp Val Gln Asp Thr Ser Thr Lys Glu Arg Leu Glu Gln Ile Ala Ser
 245 250 255
 Lys Asp Lys Pro Ser Thr Leu Leu Ala Val Ala Gly Pro Leu Thr Glu
 260 265 270
 Ile Phe Ser Asp Ile Ile Ala Asn Gln Asn Asp Arg Tyr Leu Ile Gly
 275 280 285
 Val Asp Thr Asp Gln Ser Leu Val Tyr Thr Lys Thr Lys Asn Lys Phe
 290 295 300
 Phe Thr Ser Ile Leu Lys Asn Leu Gly Tyr Ser Val Phe Ser Val Leu
 305 310 315 320
 Ser Asp Leu Tyr Thr Lys Lys Ser Asn Ser Arg Asn Leu Ala Gly Phe
 325 330 335
 Glu Phe Gly Lys Lys Ser Ala Thr Val Tyr Leu Gly Ile Lys Asp Arg
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 355 360 365
 Ala Thr Glu Ala Ile Ser Glu Ala Lys Lys Glu Phe Glu Glu Lys Thr
 370 375 380
 Lys Thr Ile Pro Ala Glu Glu Val Arg Lys Thr Leu Glu Ile Pro Glu
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 Ile Thr Asp Ile Asn Asn Leu
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 <212> DNA
 <213> Mycoplasma hyopneumoniae

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<210> 6
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 <212> PRT

<213> Mycoplasma hyopneumoniae

<400> 6

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Thr Phe Leu Leu Val Leu Ala Ser Glu Leu Tyr Phe Pro Ser Ser Ser
35 40 45
Ala Val Glu Leu Ser Thr Glu Val Ile Ser Pro Pro Val Arg Ala Pro
50 55 60
Ser Cys Trp Ile Ala Ser Gln Leu Asp Trp Leu Asn Glu Leu Ser Phe
65 70 75 80
Thr Val Pro Pro Ala Val Thr Ile Ala Ile Phe Ser Pro Lys Cys Leu
85 90 95
Phe Ala Ser Ala Phe Ala Ala Ile Ile Ser Asp Phe Arg Ser Leu Thr
100 105 110
Ser Pro Glu Ile Phe Glu Thr Ser Val Ile Cys Leu Phe Trp Leu Ser
115 120 125
Ala Asp Phe Ser Ser Leu Val Val Ser Leu Ser Gln His Pro Ala Glu
130 135 140
Ile Val Ala Ile Ala Glu Ser Gly Lys Thr Lys Pro Lys Pro Arg Asn
145 150 155 160
Leu Phe His Phe Ile Phe Phe Phe Ile Val Val Leu Leu Ile Asn Cys
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Leu His Phe Leu Leu Tyr Ser Lys
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<210> 7

<211> 14

<212> PRT

<213> Mycoplasma hyopneumoniae

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<222> 3

<223> Incomplete sequence obtained from publication WO 96/28472

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<210> 8

<211> 10

<212> PRT
<213> Artificial Sequence

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Oligonucleotide

<400> 8
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<210> 9
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Oligonucleotide

<400> 9
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Trp Val Arg Lys Tyr
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<210> 10
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<212> DNA
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<400> 10
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<210> 11
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<400> 11
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<210> 13

<211> 27

<212> DNA

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<223> Description of Artificial Sequence:
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<400> 13

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<210> 14

<211> 26

<212> DNA

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<400> 14

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<210> 15

<211> 26

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:
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<400> 15

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<210> 16

<211> 21

<212> DNA

<213> Artificial Sequence

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Oligonucleotide

<400> 16
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<210> 17
<211> 22
<212> DNA
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<223> Description of Artificial Sequence:
Oligonucleotide

<400> 17
gaacgaaaat ccgaaattat gg 22

<210> 18
<211> 22
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Oligonucleotide

<400> 18
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<210> 19
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Oligonucleotide

<400> 19
gtgatgccgt tcacaagatg 20

<210> 20
<211> 21
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<400> 20
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<210> 21
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<400> 21
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<210> 22
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<400> 22
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<210> 23
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<400> 23
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<210> 24
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<223> Description of Artificial Sequence:
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<210> 25
<211> 22
<212> DNA
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<400> 25

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<210> 26

<211> 25

<212> DNA

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<210> 27

<211> 19

<212> DNA

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<210> 28

<211> 22

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:
Oligonucleotide

<400> 28

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<210> 29

<211> 34

<212> DNA

<213> Artificial Sequence

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Oligonucleotide

<400> 29

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<210> 30

<211> 34

<212> DNA

<213> Artificial Sequence

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<400> 30
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<210> 31
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<400> 31
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<210> 32
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<400> 32
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<210> 33
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 <213> Artificial Sequence

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 Oligonucleotide

<400> 33
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<210> 34
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<400> 34
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<210> 35
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<400> 35
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<210> 36
<211> 24
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Oligonucleotide

<400> 36
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<210> 37
<211> 21
<212> DNA
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Oligonucleotide

<400> 37
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<210> 38
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Oligonucleotide

<400> 38
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<210> 39
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Oligonucleotide

<400> 39
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<210> 40
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Oligonucleotide

<400> 40
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<210> 41
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<212> PRT
<213> Mycoplasma hyorhinis

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35 40 45
Ala Glu Ile Glu Lys Ala Lys Asn Phe Asp Phe Asn Thr Val Leu Leu
50 55 60
Thr Ala Gly Gly Thr Val Gln Asp Lys Ser Phe Asn Gln Ser Ile Trp
65 70 75 80
Glu Ala Val Leu Glu His Tyr Asp Gln Ile Glu Lys Thr Thr Asn Leu
85 90 95
Asp Arg Val Ser Gln Glu Thr Asn Asn Gln Ser Glu Leu Ile Gly Lys
100 105 110
Tyr Lys Asn Phe Leu Asn Gly Asn Lys Asn Val Trp Ile Leu Thr Gly
115 120 125
Phe Gln Gln Gly Gln Glu Phe Pro Lys Phe Leu Lys Gln Thr Asp Ser
130 135 140
Asn Gly Lys Lys Tyr Ser Asp Leu Leu Ala Glu Lys Lys Val Ile Ile
145 150 155 160
Val Ala Val Asp Trp Asp Leu Ser Lys Glu Asp Lys Asp Leu Ile Lys
165 170 175
Ala Gly His Phe Ile Ser Leu Leu Tyr Lys Thr Glu Glu Ala Gly Phe
180 185 190

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Gly	Val	Thr	Asp	Phe	Ile	Ala	Gly	Phe	Leu	Ala	Gly	Ile	Ala	Lys	Tyr	225	230	235
Asn	Asn	Asp	Asn	Pro	Thr	Ala	Lys	Val	Thr	Ile	Ser	Asp	Asn	Asn	Ile	245	250	255
Asn	Ile	Asp	Thr	Gly	Phe	Ile	Ser	Asn	Asp	Lys	Thr	Ala	Thr	Phe	Ile	260	265	270
Asn	Gly	Ile	Val	Asn	Lys	Ser	Ser	Leu	Val	Leu	Pro	Val	Ala	Gly	Ser	275	280	285
Leu	Thr	Ser	Ser	Val	Val	Asp	Ala	Ile	Lys	Lys	Ser	Asn	Lys	Asp	Thr	290	295	300
Lys	Tyr	Leu	Ile	Gly	Val	Asp	Thr	Asp	Gln	Ser	Lys	Ile	Phe	Ser	Pro	305	310	315
Ala	Thr	Val	Phe	Phe	Thr	Ser	Ile	Glu	Lys	His	Leu	Gly	Arg	Thr	Ile	325	330	335
Tyr	Gln	Val	Leu	Thr	Asp	Ile	Trp	Leu	Lys	Lys	Glu	Asp	Ser	Lys	Phe	340	345	350
Leu	Gly	Ser	Phe	Arg	Ser	Phe	Lys	Leu	Thr	Asn	Pro	Ala	Asn	Ala	Thr	355	360	365
Val	Tyr	Lys	Gly	Ile	Ser	Asp	Asp	Phe	Val	Gly	Val	Ser	Asn	Ser	Thr	370	375	380
Val	Ala	Asp	Ala	Asp	Lys	Val	Lys	Ala	Gln	Glu	Phe	Leu	Asn	Glu	Ala	385	390	395
Thr	Ala	Asp	Phe	Lys	Lys	Gln	Ile	Gln	Ala	Asn	Pro	Thr	Asn	Tyr	Lys	405	410	415
Ser	Val	Leu	Gly	Ile	Pro	Thr	Met	Leu	Ile	Asn	Asp	Asn	Asp	Ala	Lys	420	425	430
Asp	Asn	Glu	Lys	Ala	Ser	Leu	Phe	His	Phe	Asp	Asn	Trp	Gln	Thr	Tyr	435	440	445
Trp	Ala	Phe	His	Ser	Arg	Phe	Ile	Asn								450	455	